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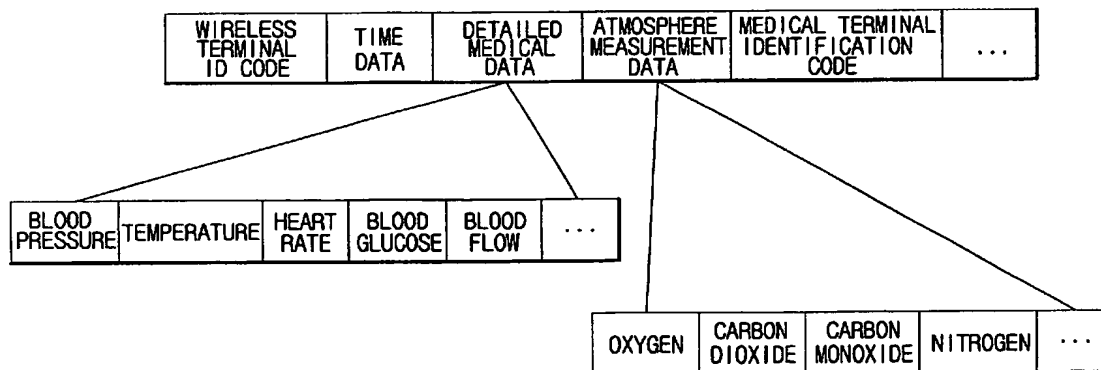
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(54) Title: REMOTE MEDICAL TREATING METHOD AND SYSTEM WITH LOCAL WIRELESS INTERFACE



(57) Abstract: The present invention relates to a remote medical system for transmitting medical information to and from the predetermined medical facilities through a wireless network. The remote medical system according to the present invention comprises a medical terminal, having a local wireless interface, for examining a patient and producing medical information, and a wireless terminal, having a local wireless interface for performing a wireless communication with the local wireless interface in medical terminal, for transmitting medical information to the medical facilities and receiving medical treatment from the medical facilities.

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**AMENDED CLAIMS**

[received by the International Bureau on 24 June 2003 (24.06.03);  
Original claims 1-4 replaced by amended claims; remaining claims unchanged (6 pages)]

1. (amended) A medical terminal in a portable medical system that communicates medical information between a wireless terminal and said medical terminal by wireless, said medical terminal comprising:

5           a condition examining part for examining a condition of user's health;

          a medical information converting part for converting condition information produced by said condition examining part into medical information that can be perceived by the outside world;

          a local wireless interface for medical terminal for transmitting medical  
10   information to the local wireless interface of the wireless terminal, such that the medical information is transmitted to a medical institution and a medical result information is transmitted from the medical institution; and

          a controlling part for controlling operations of said condition examining part, said medical information converting part, and said local wireless interface for medical  
15   terminal.

2. The medical terminal as stated in claim 1, wherein said local wireless interfaces with the wireless terminal, and said medical terminal is one selected from a group consisting of BlueTooth, IEEE 802.11, IrDA, and Home RF.

3. The medical terminal as stated in claim 1, wherein said condition examining part is one selected from a group consisting of a blood pressure monitor, a thermometer, a heart rate monitor, a diabetes monitor, a blood flow monitor, a blood glucose monitor, and an atmosphere monitor.

5

4. (amended) A wireless terminal for remote access examination in a portable medical system that communicates medical information between said wireless terminal and a medical terminal by wireless, said wireless terminal comprising:

an input part for receiving information from a user;

10

an output part for displaying selected information to be perceived by the user;

a local wireless interface for wireless terminal to receive medical information via a local wireless interface for the portable medical system;

an RF converting part for converting medical information into an RF signal for wireless communication;

15

an RF transducer for transmitting the RF signal to a predetermined medical institution and for receiving medical result information from the medical institution;

a memory for storing selected information; and

a controlling part for controlling operations of said input part, said output part, said local wireless interface for wireless terminal, and said RF transducer.

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5. A remote medical system comprising:

a medical terminal for examining a condition of user's health to produce medical information; and

a wireless terminal for transmitting medical information received from said medical terminal to a predetermined medical institution and for receiving medical result information from the medical institution,

wherein said medical terminal comprises:

a condition examining part for examining the condition of user's health;

a medical information converting part for converting condition information produced by said condition examining part into medical information that can be perceived by the outside world;

a local wireless interface for medical terminal for transmitting medical information to the local wireless interface of the wireless terminal, such that medical information is transmitted to a medical institution and medical result information is transmitted from the medical institution; and

a controlling part for controlling operations of said condition examining part, said medical information converting part, and said local wireless interface for medical terminal,

wherein said wireless terminal comprises:

an input part for receiving information from the user;

an output part for displaying selected information to be perceived by the user;

a local wireless interface for wireless terminal to receive medical information  
via a local wireless interface for the portable medical system;

an RF converting part for converting medical information into an RF signal for  
5 wireless communication;

an RF transducer for transmitting the RF signal to the medical institution and  
for receiving medical result information from the medical institution;

a memory for storing selected information; and

a controlling part for controlling operations of said input part, said output part,  
10 said local wireless interface for wireless terminal, and said RF transducer.

6. A method for processing medical information by using a wireless terminal and a  
medical terminal both having local wireless interfaces, said method comprising the  
steps of:

15 examining a condition of user's health;  
converting condition information related to the condition of user's health into  
medical information that can be perceived by the outside world; and

transmitting the medical information to the local wireless interface for wireless  
terminal through the local wireless interface for medical terminal for the purpose of

20 transmitting the medical information from the wireless terminal to a predetermined

medical institution and receiving medical result information from the medical institution.

7. A method for processing medical information by using a wireless terminal and a medical terminal both having local wireless interfaces, said method comprising the

5 steps of:

receiving medical information provided through a local wireless interface for medical terminal;

converting medical information into an RF signal for wireless communication;

transmitting the RF signal to a predetermined medical institution through a

10 wireless network; and

displaying medical result information received from the medical institution for a user to perceive.

8. A method for processing medical information in a remote access medical system

15 provided with a wireless terminal and a medical terminal both having local wireless interfaces, said method comprising the steps of:

examining a condition of user's health;

converting condition information related to the condition of user's health into medical information that can be perceived by the outside world;

20 transmitting medical information to the local wireless interface for wireless

terminal through the local wireless interface for medical terminal for the purpose of transmitting medical information from the wireless terminal to a predetermined medical institution and receiving medical result information from the medical institution;

receiving medical information provided through a local wireless interface for

5 medical terminal;

converting medical information into an RF signal for wireless communication;

transmitting the RF signal to a predetermined medical institution through a wireless network; and

displaying the medical result information received from the medical institution

10 for a user to perceive.

**STATEMENT UNDER ARTICLE 19 (1)****PCT/KR03/00025**

1. According to a notification of transmittal of the international search report, the claimed invention (PCT/KR03/00025) does not involve an inventive step about the cited references (KR2001-019660A, KR2001-246707A, US5959529, KR1996-020941A).

2. We think that PCT/KR03/00025 is distinguished from the cited references as follows;

**KR2001-019660A**Subject of the cited reference:

Remotely monitoring a patient's state

The cited reference's claim related to the present invention:

plural sensors for monitoring a body state and outputting a biological signal;

biological signal processing module for producing biological data by processing the biological signal according to the predetermined diagnosis algorithm;

control/communication module for providing the biological data to a cellular phone and controlling the cellular phone to transmit the biological data to the predetermined receiver.

Comparison with the present invention:

(a) According to the present invention, a medical terminal for examining a condition of user's health and a wireless terminal can communicate with each other by wireless. Almost all wireless terminals in these days employ a communication function, for example, IrDA or Bluetooth, for sending/receiving data to/from a neighboring computing device. But, the medical terminal of the cited reference communicates with the wireless terminal by wire.

(b) The medical terminal of the present invention does not control the cellular phone.

**KR2001-246707A**Subject of the cited reference:

A wireless terminal that can analyze and transmit the biological signals measured by external devices.

The cited reference's claim related to the present invention:

keypad, FM-Digital radio receiver, cellular module, audio input/output module,

computer interface for communicating biological signals with computer,

biological signal receiver for receiving the biological signals from external measuring



devices,

display for displaying the received biological signal,

storage for storing the received biological signals,

controller for control a subsequent process of alarm signal transmission to the predetermined receiver's terminal when an abnormal signal is inputted.

Comparison with the present invention:

The wireless terminal in the present invention does not perform any analysis but performs a wireless communication and stores data. The main object of the present invention is to provide the remote medical system composed of the cheap medical terminal and the general wireless terminal.

**US5959529**

Subject of the cited reference:

Portable, real-time, re-programmable device and method for remotely monitoring the state of the subject

The cited reference's claim related to the present invention:

central monitoring device

portable monitoring units composed of sensors, positioning determining device, microprocessor, subject state signal input device and transducer.

Comparison with the present invention:

The main idea of the cited reference was already described in the prior art of the present invention. That is, the medical terminal having wireless communication function is very expensive, so the present invention comprises a local wireless interface for communicating medical information with the wireless terminal that transmits medical information to remote medical institution's server.

**KR1996-020941A**

Subject of the cited reference:

Portable device for increasing a induction speed of the biological signals by storing the measured biological signals and generating a biological stimulating signal by the use of the measured biological signals.

The cited reference's claim related to the present invention:

Biological signal input interface

Biological stimulating signal interface

Biological signal process means

Measured biological signal storing means

Biological stimulating signal storing means

Comparison with the present invention:

The invention described in the cited reference does not directly relate to the present invention because the cited invention is only for increasing the induction speed of the biological signals and does not perform a remote medical check.

**3. Conclusion**

As described above, the present invention involves an inventive step about the cited references.